

REMARKS

Claims 38, 149 - 155 and 157 - 164 remain in this application, while claims 165 - 177 have been added by this amendment. Claims 2-14, previously withdrawn and which depend from withdrawn claim 1, are cancelled without prejudice to assert those claims in a later continuing or divisional application.

Claim 38, 149, 151 - 155, and 157 - 158. are currently amended. The remaining claims depend, directly or indirectly, from the two independent claims 38 and 151 discussed below, and therefore should be in a condition for allowance.

Claim 155 was objected under 35 U.S.C. 112 for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Applicant has amended the language so that the claim is no longer indefinite to remove the language "at least" and substitute therefor "from" in regard to the range.

Applicant notes with appreciation that claims 151 and 164 were previously indicated to present allowable subject matter. Applicant has amended claim 151 to place it in independent form, and thus claim 151 and claims 165 to 177 depending therefrom should now be in condition for allowance.

Turning now to the rejection on the merits, claims 38, 149, 150, 152 - 155 and 157 - 163 were rejected under 35 U.S.C. 103(a) as being unpatentable over a hypothetical combination of U.S. Patent No. 6,093,681 to Ward et al. in view of U.S. Patent No. 6,358,909 to Ochomogo.

From a reading of Ward et al., it is clear that this reference does not teach, nor suggest, an aqueous dispersion or a water dispersible powder suitable for combating living organisms and comprising at least two gums selected from the group consisting of guar gum, xanthan gum and scleroglucan.

Ochomogo teaches a suspoemulsion system for delivery of actives, said suspoemulsion comprising one active agent (Active) selected from the group consisting of an abrasive, an

antimicrobial agent, a quaternary ammonium compound, fluoropolymers, polysaccharides, polycarboxylates, polystyrenesulfonates, acrylate polymers, polyethyleneimines, polyvinylpyrrolidones, methylvinyl ether, polyvinyl alcohols, and mixtures thereof, an encapsulate comprising an oil selected from the group consisting of hydrocarbons with a carbon chain length of at least 10, glycerides, terpene compounds, seed oils, silicone oils, castor oil, mineral oil, and mixtures thereof, and at least first and second nonionic surfactants, wherein the first nonionic surfactant has an HLB of less than about 7, and the second nonionic surfactant has an HLB of greater than about 10, the encapsulate coating the active and suspending it within the aqueous phase. The Active in Ochomogo can thus be:

- an abrasive, such as finely divided silica,
- antimicrobial actives,
- Fragrances,
- hypochlorite generating compounds,
- fabric softeners,
- fluorescents whitening agents,
- shining, restrative or antifilming agents, such as water soluble to water dispersible polymers, for example polysaccharides, such as cellulose derivatives, gums, gelatin, etc.
(the list of possible polymers is extremely broad)

In the Ochomogo composition, the Active is encapsulated in an oil phase possibly thickened with a co-thickener, said encapsulating being helped by using one or more lipophilic surfactants. The nonionic surfactant is required for stable suspension of the active in water. Also in Ochomogo, the Active is encapsulated in an oil phase, said active being for example abrasive particles or polymer particles.

In the Ochomogo reference, the abrasives, such as finely divided silica, are used as abrasives, not as particles for combating at least one living organism selected from the group consisting of insects, molluscs, acarides, mites, ticks and parasites, or for repelling at least one

element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites.

Ochomogo only teaches that a specific suspoemulsion for the delivery of actives, such as abrasives. The Ochomogo suspoemulsion is intended to deliver abrasives for their abrasive properties.

Ochomogo, as understood by one skilled in the art, is of the opinion that finely divided silica particles are not antimicrobial agents, nor agents active for attacking microorganisms. The Examiner's attention is invited to column 10, lines 39 to 43, where Ochomogo suggests the addition of specific adjuncts for attacking microorganisms.

As stated by Ochomogo, the abrasives to be used are preferably SIDENT® 9 of Degussa and Aerosil® R 972. Submitted herewith, in the accompanying Information Disclosure Statement, are data sheets providing product information concerning the SIDENT® 9 of Degussa and Aerosil® R 972.

From the submitted product information, it appears that SIDENT® 9 of Degussa and AEROSIL® are not considered as potential particles for combating at least one living organism selected from the group consisting of insects, molluscs, acarides, mites, ticks and parasites, or for repelling at least one element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites.

SIDENT® 9 is a specific product for a range of precipitated silica having a low surface area, namely a surface area (N₂) of about 45m²/g.

AEROSIL® R 972 has a surface area (BET) of about 110 (+/- 20) m²/g. In the example, AEROSIL® is used as a co-thickener, as are xanthan gum, guar gum, and other gums, for the oil phase (see column 8 of Ochomogo, lines 8 to 25).

AEROSIL® (as taught by Ochomogo) silica particles are thus not used as actives (i.e., as abrasives) nor as an active agent for combating at least one organism selected from the group consisting of insects, molluscs, acarides, mites, ticks and parasites, or for repelling at least one

element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites.

The composition as exemplified in Ochomogo does thus not contain at least 7% by weight of silicon particles comprising a hydrophobic coating, a SiO_2 content of at least 80% by weight, an average primary particle size comprised between 5 and 40nm and a BET surface of at least $125 \text{ m}^2/\text{g}$ nor containing at least two gums selected from guar gum, xanthan gum and scleroglucan.

The AEROSIL® R 972, hydrophobic SiO_2 particles provided with a hydrophobic DDS coating is only present in the composition of Ochomogo at a very low rate, less than 1%. The maximum amount of thickening agent present in the exemplified Ochomogo composition is well below 2% by weight, the amount of thickening agent used being only present for the ease of blending, not for combating at least one organism selected from the group consisting of insects, molluscs, acarides, mites, ticks and parasites, or for repelling at least one element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites.

As stated in Ochomogo, the oil phase can comprise co-thickeners, such as finely divided silica such as AEROSIL®, Xanthan gum, Guar gum and other gums (see column 8, lines 20 to 25). The thickener or thickening agents are added for the ease of blending. The thickeners present in the composition is less than 2%. In Ochomogo, AEROSIL® is used as a thickener agent for the oil phase, such AEROSIL® R 972 being present used in the example as a co-thickening agent at a rate of less than 1%.

The abrasive particles of example 1 (SIDENT® 9) are not silicon containing particles comprising a hydrophobic coating, an SiO_2 content of at least 80% by weight, an average primary particle size comprised between 5 and 40 nm and a BET surface of at least $125 \text{ m}^2/\text{g}$.

When thus considered, Ochomogo is without any reference to the improvement of the present invention directed to improving the efficiency of the active agent (i.e. silicon (Si) containing particles) for combating at least one living organism selected from the group

consisting of insects, molluscs, acarides, mites, ticks and parasites or for repelling at least one element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites, and specifically to the invention as claimed for those silicon (Si) containing particles :

- (a) comprising:
 - a hydrophobic coating;
 - a SiO₂ content of at least 80% by weight;
 - an average primary particle size comprised between 5 and 40nm; and a BET surface of at least 125m²/g; and
- (b) being selected from the group consisting of kaolinite, montmorillonite, attapulgite, hectorite, smectite, illite, bentonite, halloysite, vermiculite, sepiolite, beidellite, palygorskite, talc, SiO₂, and mixtures thereof, for combating at least one living organism selected from the group consisting of insects, molluscs, acarides, mites, ticks and parasites or for repelling at least one element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites, by using an effective amount of at least two gums selected from the group consisting of guar gum, xanthan gum and scleroglucan for increasing the efficiency of said at least 7% by weight of silicon (Si) containing particles.

The Ward et al. reference relates to a composition for application to a plant, i.e. a composition for application to a plant comprising an exogenous herbicide (such as a postemergent herbicide), an aqueous diluent, and a first excipient that is amphiphilic.

As stated by Ward in column 26, lines 56 to 62, in aqueous glyphosate formulation, to achieve the higher glyphosate concentrations, it is often beneficial to add other ingredients to provide acceptable storage stability, for example colloidal silica or aluminum oxide at 0.5 - 2.5%. Silica is thus used at a rate well below 7% and is not used, nor considered as potentially active for combating at least one organism selected from the group consisting of insects, molluscs,

acarides, mites, ticks and parasites, or for repelling at least one element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites.

In column 38, lines 46 and 47, it appears that various proprietary excipients can be used, said excipients being thus not considered as active exogeneous chemical. In the table from column 38 to column 42, a list of excipients is given. In this list, reference is made to several AEROSIL® products (column 38-9, first lines of the table), to Xanthan gum (column 39, line 39 of the table).

In column 29 to column 34, aqueous compositions have been tested in the field containing colloidal particulates excipients. In these examples of the field compositions, the colloidal particulate content (such as of silica AEROSIL® particles) is always at most 1.5%, manifestly this is well below 7%.

In the table from column 36 to column 38, dry compositions were tested in the field; these dry compositions always comprising up to 2%, but well below 7% by weight of silicon containing particles having a hydrophobic coating.

In example 70 of Ward, the AEROSIL® content of the compositions is at most 1.5%, this AEROSIL® being used as a stabilizing agent. See also other examples, with AEROSIL® content up to 2%; example 76, Table 76a, column 195; example 77, table 77a, column 197+ column 198, lines 54 and 55; example 94, column 226, lines 65 to 67; table 94a, column 227; example 96, column 230, lines 65 to 67 – “[t]he compositions shown as containing colloidal particulate were not storage-stable unless the colloidal particulate was included as shown” –; table 96a, column 231; example 97, with dry compositions comprising less than 2% AEROSIL®; table 97A, column 233; example 99, table 99a, column 237; example 100, table 100a, column 239; example 101, table 101a, column 242; example 102, table 102a, columns 244 and 245; example 105, table 105a, column 253; example 106, table 106a, column 255; example 108, table 108a, column 259; example 103, table 103a, column 247. The AEROSIL content of 3% for

examples 104-07, composition having no good herbicidal efficiency at the rate of 400g active compound (glyphosate) per hectare.

Thus, Ochomogo and Ward, even when provided in the hypothetical combination proposed in the Office Action, do not teach, nor suggest, the composition comprising at least 7% silicon containing particles comprising a hydrophobic coating, a SiO₂ content of at least 80% by weight, an average primary particle size comprised between 5 and 40 nm and a BET surface of at least 125 m²/g could be suitable for combating at least one organism selected from the group consisting of insects, molluscs, acarides, mites, ticks and parasites, or for repelling at least one element selected from the group consisting of insects, molluscs, acarides, mites, ticks, dirt and parasites, said composition comprising moreover an effective amount of at least two gums selected from Xanthan gum, guar gum and scleroglucan for increasing the efficiency of the at least 7% silicon containing particles.

Ochomogo and Ward only teach the use of silica particles as abrasive materials or as a thickening agent or as a stabilizer.

Thus, as set forth in *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, which affirmed the *Graham v. John Deere* (383 U.S. 1) factors of determining the scope and content of the prior art, ascertaining the differences between the prior art and the claims at issue, resolving the level of one of ordinary skill in the pertinent art, and evaluating any secondary consideration evidence, it is clear that the differences in the present invention as claimed and those in the prior art are such that one of ordinary skill in the art would not have found the present invention obvious. Where the prior art references, as here, are directed to herbicides (Ward) and laundering or cleaning (Ochomogo et al), there lacks any reason for one of ordinary skill in the art to look for and combine the references. In the case of these two references, "there is (no) apparent reason to combine the known elements in the fashion claimed" in the present application. See *KSR* at *13, and the Memorandum to Technology Center Directors of Deputy Commissioner Focarino at 2. Moreover, in the present application, the combined references, as noted above, do not meet the

Title: COMPOSITION FOR COMBATING/REPELLING INSECTS, BIRDS, DIRTS AND PARASITES

Response to Office Action dated: April 6, 2007

claim limitations. One cannot use the teachings of the claimed invention and read them into the prior art, else the distortion caused by hindsight bias will always be available to support a rejection.

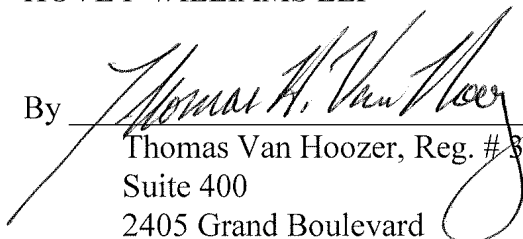
The new claims 165 - 177 were added to further characterize the dispersion of this invention. These new limitations coupled with the amendments made to the prior claims should overcome the obviousness rejection raised by the Examiner.

In view of this response and the remarks herein, Applicants respectfully submit that not only claims 151 and 164, but in fact all of the claims 38, 149 - 155 and 157 - 177 are in allowable condition and requests a corresponding Notice of Allowance. In the event of further questions, the Examiner is urged to call the undersigned. Any additional fee which might be due in connection with this application should be applied against our Deposit Account No. 19-0522.

Respectfully Submitted,

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(Docket No. 33154-CIP1)